

The Science of Healing Revealed

What Everyone Deserves to Know

“Imagine the profound implications of being able to manage and control the healing process. The knowledge that we are gaining through emerging science will soon give us the power to do this.” -Dr. Gary Samuelson

How interesting it is when we can trace all of the complex mysteries of the healing process back to a simple set of rules that each of the cells follow. How interesting it is to discover the huge and important role that oxidants and antioxidants have in this healing process. When damage occurs to our cells, the oxidants become the red flags that mark out where and how much damage has been done. What would happen if the oxidants were not there to flag the damage?

Toxins, radiation, infections, cuts, scrapes, bruises, oxygen starvation and any other form of damage would go undetected and be neglected without oxidants. Healing would be impossible. It is this continuous balance between the production of oxidants and reductants and their eventual elimination by the antioxidants that allows the cells to react to the damage. It is the response to the resulting imbalance of oxidants (oxidative stress) that allows the cells and tissues to respond and heal themselves.

This is the new picture emerging from the biosciences on healing.

The emerging field of redox signaling molecules deals with biological redox messengers that are absolutely fundamental to the healing process in all higher forms of life. If this field can be exploited, then the benefits would be as broad and far-reaching as could possibly be hoped for. Oxidative stress (the accumulation of oxidants around and inside of cells) for example, manifests itself in almost every known health condition.

Starting with the brain: brain damage from strokes or head injuries, neurological deterioration, addiction and alcohol withdrawal symptoms, seizure triggers and so on are all related to excessive oxidative stress and associated brain-cell death. Skin damage, infections, aging and tissue degradation all have oxidative stress at their root. Organ damage, digestive problems, autoimmune problems, allergies, nose and throat conditions, cardiovascular problems and abnormal growths all have been linked to abnormal oxidative stress conditions. And the list goes on and on.

Preventing oxidative stress from causing premature tissue damage to organs can be accomplished by increasing the concentration and efficiency of the natural antioxidants that are produced and reside inside the cells themselves, thus protecting the insides of cells from stray oxidative damage. These types of antioxidants cannot be found in foods or food-based supplements (many supplements only stay in the blood).

The native antioxidants must be produced inside the cells themselves.

Therefore, the only way to increase their activity is to introduce into the body the messenger molecules that signal for their production or to increase the amount of reductants that these antioxidants need to function.

Both of these cellular enhancements are accessible to redox-induced messenger molecules.

The reduction of induced oxidative stress is within the reach of certain redox signaling compounds that have already been produced and already have been shown in the laboratory to greatly enhance the activity of native antioxidants and call for their increased production inside of living cells.

These redox-induced messenger molecules (which we now call redox signaling molecules) have an advantage in helping the body detect and eliminate dysfunctional cells. The same messenger molecules that speed healing by increasing the intensity of the signals between cells, also can help the healthy cells to better identify the weak signals of dysfunctional cells. The healthy cells then can respond to these signals and send out the messengers necessary to eliminate the dysfunctional cells and replace them with healthier cells.

If stable redox-based messenger molecules can be found, the same as would accelerate healing, they could be administered systemically and would contribute to the detection and elimination of dysfunctional cells throughout the whole body

The information above is taken from the book, *The Science of Healing Revealed*, by Dr. Gary Samuelson, originally published in 2009